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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/601,152	09/05/2000	Markus Weisbeck	MO-5845/LEA3	6993

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BAYER CORPORATION
PATENT DEPARTMENT
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EXAMINER

JOHNSON, EDWARD M

ART UNIT	PAPER NUMBER
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1754

10

DATE MAILED: 04/23/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/601,152

Applicant(s)

WEISBECK ET AL.

Examiner

Edward M. Johnson

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 February 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 6-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 6-12 is/are rejected.
- 7) ☒ Claim(s) 6 and 12 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☒ Other: irradiated mail attachment

DETAILED ACTION

Claim Objections

1. Claims 6 and 12 are objected to because of the following informalities: "a catalyst composed of... gold particles that has been used" appears incorrect. In view of Applicant's remarks, Examiner suggests --a catalyst, which is composed of... gold particles, that has been used--. Appropriate correction is required.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 7-9 and 11 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 7, the phrase, "was produced" makes it unclear as to whether the steps following the phrase are actually part of the claimed regeneration process.

Claims 7-9 and 11 appear to recite use limitations of a catalyst product rather than positively recited process steps

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for regenerating a catalyst and it is unclear how the claims limit a process for catalyst regeneration.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 6-7 and 9-12 are rejected under 35 U.S.C. 102(b) as being anticipated by Muller et al. WO 9602323A1 (translated in US Pat. No. 5,859,265).

Regarding claims 6 and 12, Muller '265 discloses a method for regeneration of a catalyst based on titanium silicalite (see abstract) with a gold modifier (see column 4, lines 33-36 and claim 3) comprising contacting the catalyst with a solution of hydrogen peroxide in mineral acid (see column 5, lines 16-18).

Regarding claim 7, Muller '265 discloses chemical vapor deposition (see column 3, lines 65-66) and making a white suspension reaction mixture from solution (see column 5, lines 29-42).

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Regarding claim 9, the claimed range of hydrogen peroxide includes zero and Muller '265 discloses catalyst in contact with 0.196% hydrogen peroxide (see Example 3).

Regarding claim 10, Muller '265 discloses a method for regeneration of a catalyst based on titanium silicalite (see abstract) with a gold modifier (see column 4, lines 33-36 and claim 3).

Regarding claim 11, Muller '265 discloses gas phase olefin epoxidation in the presence of hydrogen (see column 4, lines 6-61).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Muller as applied to claim 6 above, and further in view of Bowman et al. 6,031,116.

Muller fails to disclose contacting the catalyst being regenerated with steam under pressure.

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Bowman '116 discloses adding water into the gas (see column 12, lines 50-67 and column 13, lines 1-6).

It is considered that it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the water of Bowman with the regeneration of Muller because Bowman discloses his water to be beneficially added to the regeneration gas stream, for oxidation catalyst regeneration (title and abstract) and Muller discloses high temperature regeneration in inert gas or solution (see column 5, lines 9-18).

Response to Arguments

8. Applicant's arguments filed 2/26/02 have been fully considered but they are not persuasive.

Some rejections under 35 USC 112(2) have been withdrawn in view of Applicant's amendment.

It is argued that the Patent Office objected to Claim 6 for informal reasons. This is not persuasive because the phrase, "particles that has been used" connects the noun, "particles" to "used". Examiner now suggests punctuation, in view of Applicant's remarks as to what is intended (see above).

It is argued that claims 7-9 and 11 merely describe the catalyst material being regenerated. This is not persuasive because Applicant claims a process for regeneration of a

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catalyst and not a process of using a catalyst. Therefore, one skilled in the art would not be reasonably apprised of the metes and bounds of the invention, since it is unclear how, or if, such use limitations limit a process of regenerating a catalyst as outlined in the previous Office Action.

It is argued that regarding claims 6 and 10, Muller et al. disclose a catalyst composed of titanium or vanadium silicalite having a zeolite structure. This is not persuasive because titanium silicalite is composed of titanium dioxide and silicon dioxide. Applicant does not appear to argue otherwise nor do any of Applicant's submitted references appear to suggest otherwise. Furthermore, the recitation "composed of... the gas phase" has not been given patentable weight because the recitation occurs in the preamble. A preamble is generally not accorded any patentable weight where it merely recites the purpose of a process or the intended use of a structure, and where the body of the claim does not depend on the preamble for completeness but, instead, the process steps or structural limitations are able to stand alone. See *In re Hirao*, 535 F.2d 67, 190 USPQ 15 (CCPA 1976) and *Kropa v. Robie*, 187 F.2d 150, 152, 88 USPQ 478, 481 (CCPA 1951).

It is argued that as the Patent Office admits, Muller et al. disclose that, if required, the catalyst of their invention can

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be regenerated by contacting the catalyst with a solution of hydrogen peroxide in mineral acid. This is not persuasive because contacting a catalyst with a solution of hydrogen peroxide in mineral acid would inherently cause the catalyst to contact with hydrogen peroxide.

It is argued that regarding claim 7, Muller et al. may disclose the use of chemical vapor deposition. This is not persuasive because Muller discloses chemical vapor deposition. Applicant does not appear to argue that this method is excluded by the recitation "deposition-precipitation". Applicant appears to suggest that the deposition-precipitation method disclosed in Bowman et al. is instantly claimed. It is noted that the features upon which applicant relies (i.e., the deposition-precipitation method of Bowman et al.) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

It is argued that regarding claim 9, Muller et al. do not disclose a method for regenerating catalytic activity of a catalyst composed of a titanium dioxide or hydrous titanium dioxide support. This is not persuasive because Applicant's claimed range of concentration includes zero, which would

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include not contacting with the claimed substance at all, Muller '265 discloses catalyst in contact with 0.196% hydrogen peroxide (see Example 3), and because titanium silicalite is composed of titanium dioxide and silicon dioxide.

It is argued that finally, regarding claim 11, although Muller et al. may disclose gas phase olefin epoxidation in the presence of hydrogen. This is not persuasive because Muller '265 discloses a method for regeneration of a catalyst based on titanium silicalite (see abstract) with a gold modifier (see column 4, lines 33-36 and claim 3) comprising contacting the catalyst with a solution of hydrogen peroxide in mineral acid (see column 5, lines 16-18).

It is argued that as mentioned above, Muller et al. disclose a catalyst composed of titanium or vanadium silicalite having a zeolite structure containing platinum metals. This is not persuasive because titanium silicalite is composed of titanium dioxide and silicon dioxide and contacting a catalyst with a solution of hydrogen peroxide in mineral acid would inherently cause the catalyst to contact with hydrogen peroxide.

It is argued that in order to "arrive at" Applicants' claimed invention, the skilled artisan would have had to ignore the fact that Muller et al. do not even teach or motivate the skilled artisan to change the catalyst. This is not persuasive

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because titanium silicalite is composed of titanium dioxide and silicon dioxide and Muller discloses a gold modifier (see column 4, lines 33-36 and claim 3).

It is argued that the Patent Office states that Bowman et al. disclose that water is beneficially added to the gas stream. This is not persuasive because a catalyst with a solution of hydrogen peroxide in mineral acid would inherently cause the catalyst to contact with hydrogen peroxide and Muller discloses a gold modifier (see column 4, lines 33-36 and claim 3).

Further, Bowman is not relied upon for hydrogen peroxide, which is disclosed in Muller. Bowman is relied upon for adding water into the gas (see column 12, lines 50-67 and column 13, lines 1-6). One cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). Applicant appears to suggest that the claims are allowable if it would have been unobvious to combine Thiele (a reference that is neither cited nor relied upon by the Examiner in any of the outstanding rejections) with either of the 2 references relied upon by the Examiner. This is not persuasive because the issue of whether the claims are patentable over Thiele is irrelevant to the issue at hand, which is whether the

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claims are patentable over the references relied upon by the Examiner.

It is argued that even if the references were combined, there still would have been no suggestion, teaching or motivation for one skilled in the art to regenerated catalyst activity. This is not persuasive because no particular pressure is claimed and atmospheric pressure is "pressure", as claimed. Any pressure above or below atmospheric pressure is also "pressure".

In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

Conclusion

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is

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reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Edward M. Johnson whose telephone number is 703-305-0216. The examiner can normally be reached on M-F 6:30-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven P. Griffin can be reached on 703-308-1164. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

EMJ
April 18, 2002



STUART L. HENDRICKSON
PRIMARY EXAMINER